



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

Mike James
MEMORANDUM

163121AAC

DATE: May 28, 1986
TO: EDG/DAPC
FROM: Bill Ingersoll *BI*
SUBJECT: EDGR - Part II
Monsanto Chlorosulfonic Acid Incident of 3-3-86

US EPA RECORDS CENTER REGION 5



491565

I. Significant Legal Issues - There is a significant issue in determining Monsanto's ability to have prevented the incident. The investigation and evaluation continue.

II. Strength of Evidence - It is admitted that the release occurred from Monsanto's process. Some people sought medical treatment but extent of injuries is unclear.

III. Weakness of Case - There is not enough information available to accurately evaluate this aspect. However, I would anticipate that it will involve whether or not there were any ways that Monsanto could have avoided the occurrence by either better maintenance or equipment design.

IV. Relevant Precedent - Not known.

V. Similar Pending Cases - None for this type of process, but enforcement has been sought in other cases where releases caused injury.

VI. Recommendation - I recommend pursuing enforcement primarily to gain leverage in negotiating preventative measures. An appropriate penalty figure may be determined later.

cc: John Justice

Bill Ingersoll
John Justice
Mike James
...

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DATE: May 19, 1986

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Use Only~~

TO: Bill Ingersoll

FROM: John Justice *John Justice*

SUBJECT: EDGR for MONSANTO'S Chlorosulfonic Acid Incident - I.D. 163 121 AAC

Please find attached the Regional Enforcement Decision Group Referral for your review and comments relating to the March 3, 1986 incident at the Monsanto, Inc. Sauget's facility. Please forward ASAP to the Enforcement Decision Group for their recommendation.

JBJ:pbo

cc: Miles Zamco - w/o attachments
cc: DAPC Collinsville

Attachment

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ENFORCEMENT PROGRAMS

MAY 20 1986

Environmental Protection Agency

ENFORCEMENT DECISION GROUP REFERRAL

Part 1: Technical Aspects

Type of Source:

Chlorosulfonic Acid Plant

Type of Emissions:

Chlorosulfonic Acid Mist

Non-Attainment Area?

Yes, for ozone and TSP, but does not apply to incident emissions

Quantity of Emissions (allowable & actual):

Based on information received from Monsanto less than 100 pounds is the estimated quantity.

Location:

I.D. #: 163 121 AAC

Just southeast of the intersection of State Route 3 and Monsanto Avenue at Monsanto's W.G. Krummrich Plant in Sauget (St. Clair County) Illinois. (See Attachment 1).

Owner:

Monsanto Industrial Chemicals Co.

Violations:

Dates:

March 3, 1986

Description:

See Attachment 2, which is from the incident investigation report Monsanto sent upon request to the Regional Office on April 4, 1986.

Rules or Provisions Violated:

Section 9(a) of the Environmental Protection Act and 35 Ill. Adm. Code 201.141.

Emissions Due to Violations (Quantity & Type):

Based on Monsanto's estimate less than 100 pounds of chlorosulfonic acid.

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Duration of Response:

Based on Monsanto's April 3, 1986 response to the emissions traveling beyond the property limits lasted from 1800 to 1840 or, approximately 40 minutes.

Degree of Health Hazard:

Chlorosulfonic acid can cause severe acid burns and is very irritating to the eyes, lungs and mucous membranes. It can cause acute toxic effects either in the liquid or vapor state. Inhalation of concentrated vapor may cause loss of consciousness with serious damage to lung tissue. Contact of liquid with the eyes can cause severe burns if not immediately and completely removed. It also causes severe skin burns due to its highly corrosive action. Upon ingestion, it will irritate the mouth, esophagus and stomach to a serious degree and on contact with skin cause dermatitis. Even in the vapor form it may cause conjunctivitis.

Technical Remedy:

Replace existing water cascading cooling system with a totally enclosed system.

Estimate of Cost:

Due to the uniqueness of the system, the cost of designing a new control system for this process is unknown.

Programmatic Significant:

Not applicable.

Sources with Similar Problems:

This is the only plant of its type in Region III.

Characterization of Degree of Cooperation:

Monsanto did reply to the Agency's March 7, 1986 request for information concerning the chlorosulfonic acid process. Their response, dated March 20, 1986, while providing information on the chlorosulfonic acid, lacked completeness. Monsanto was contacted again and on April 4, 1986 the Regional Office received Monsanto's incident investigation report. A follow-up to the March 20, 1986 response was received on April 18, 1986.

District Engineer:

Mark Schlueter

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Relevant Inspection Dates:

Monsanto's Chlorosulfonic Acid Plant was inspected on March 6, 1986 by John Justice, Mark Schlueter and Nick Mahlandt of DWPC.

Date of CIL:

A CIL was not sent.

Date of Result of Pre-Enforcement Conference:

A conference was not held.

Recommendation of Regional Manager:

It is the recommendation of the Regional manager that Monsanto develop a new cooling method for the Chlorosulfonic Acid production system. Their current practice of water cooling through the use of the pipe rack arrangement with cascading water appears to have a confirmed weakness as relating to the expansion joints for the system. Refer to the expansion joint failure analysis for details (Attachment 3). The analysis is straight forward in its findings and shows the need to re-evaluate and design such a system. It is also recommended that in the interim that a frequent inspection and replacement schedule be utilized on the existing expansion joints on the present cooling system to minimize reoccurrences of the March 3, 1986 incident. The frequency should be determined by the recommendation of the joint manufacturer.

MCS:pbo/0054A

Attachments

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